PERISCOPE.

By Drs. M. A. STARR, G. W. JACOBY, N. E. BRILL, and LOUISE FISKE-BRYSON.

ANATOMY OF THE NERVOUS SYSTEM.

Note on the Ascending Antero-lateral Tract. H. H. Tooth, M.D. (Saint Bartholomew's Hospital Reports, vol. xxiii., 1887).

In this paper the author describes a small tract in the antero-lateral region or " mixed zone " (Flechsig) which was first recognized by Gowers, but which other observers have regarded as a part of the cerebellar tract. Bechterew and, lately, Sherrington have shown that this tract is composed of fibres which acquire their medullary sheath at a definite time in the developing fœtus. The lesion in the case consisted of a rapidly growing sarcoma, involving the membranes and compressing the cord from about the mid-dorsal to the mid-lumbar regions. That part of the cord involved in the tumor was completely disorganized and softened, as were also the lumbar and sacral regions. The sections were cut from the cervical region, which was in excellent preservation. The cord, after being cut into segments, was hardened in potassium bichromate, and was then stained in the mass, in Weigert's hæmatoxylin solution, for four days. They were then washed and kept in potassium ferrocyanide solution for four days. After careful washing they were dehydrated and saturated with solid paraffin. Sections made in this way showed the degeneration very plainly. All of the sections showed degeneration of the posterior median columns and degeneration in the antero-lateral tracts. The latter degeneration could be traced up to a level with the lowest part of the olive. The author goes on to state that the ultimate fate of the antero-lateral tract is a point of considerable interest, more especially as there is every reason to believe that its fibres are concerned in the conduction of pain sensations. "One thing seems certain, viz., that these fibres do not pass to the cerebellum *via* the restiform body. What, then, becomes of them? There are two possible ways in which they may terminate. They may have passed into the central part of the medulla, and thus become lost in the mass of fibres forming the bulk of the formatio reticularis, or they may have become connected, fibre by fibre, with the numerous ganglion-cells lying about in that part of the medulla, more especially with that group of them known as the nucleus lateralis. The nucleus lateralis is the remnant or upper termination of the lateral horn of the gray matter of the cord. If we accept as possible the conclusion that this tract is ultimately connected with the cells of the nucleus lateralis in the medulla, there is no reason why its fibres should not be received from time to time in its upward course into the cells of the lateral horn of the cord lower down. Thus we have some sort of anatomical evidence that the gray matter of the cord is concerned in the conduction of pain sensations."

PHYSIOLOGY OF THE NERVOUS SYSTEM.

Experiments on Special Sense Localizations in the Cortex Cerebri of the Monkey. By E. A. Schäfer, F.R.S. (*Brain*, x., 362, January, 1888).

It is well known that experiments upon animals regarding the visual area of the brain have led to different results in different hands. Ferrier was the first to localize this area, and he found it in the angular gyrus. Munk, Luciani and Tamburini, and Schäfer and Horsley all agreed in localizing the visual area in the occipital lobe, contending that the angular gyrus had nothing to do with vision. All cases of cortical blindness in man support the last view, and indicate that in monkeys bilateral hemiopia rather than unilateral blindness should be the effect of occipital lobe lesion. In the last edition of his work on "Functions of the Brain" Ferrier admits that the occipital lobe has something to do with vision, and admits that its lesion causes hemiopia, but he still claims for the angular gyrus an important part. It was in order, if possible, to finally settle this controversy that the present series of experiments was undertaken by Professor Schäfer and Dr. Sanger Brown. They seem to prove conclusively that the visual area lies wholly in the occipital lobe, each